

Cost-Effectiveness and Priority Setting

Summary: This project explores a broad range of ethical issues about using cost-effectiveness analysis for priority setting in the health sector.

Section: Ethics and Health Policy - Unit on Prioritization

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Background: Resources to improve health are and always have been scarce. Health must compete with other social goals and any particular health program must compete with other health programs for resources. It is not feasible to provide all the resources to health, including health care and research, or to specific health needs, that might provide some positive health benefits. Doing so would entail great and unacceptable sacrifices in other important social aims. It follows from this resource scarcity that some form of health care rationing is unavoidable, where by rationing is meant some means of allocating resources to health that will deny to some persons some potentially beneficial health care. The form this rationing takes varies in different countries and institutional contexts, as well as by how overt or covert it is.

To many health policy analysts and health economists it is an unquestioned, and so often unexamined and undefended, assumption that limited resources for health should be allocated so as to maximize the health benefits they produce for the population served. Cost effectiveness analysis (CEA) compares the aggregate health benefits secured from a given resource expenditure devoted to alternative health interventions. It is the standard analytic tool for determining how to maximize the health benefits from limited resources. Natural, even self-evident, as this maximization standard may appear to some, it assumes a consequentialist moral standard, more specifically a utilitarian standard of distributive justice. The utilitarian account of distributive justice is widely and correctly taken to be utilitarianism's most problematic feature.

Cost effectiveness analysis in the health sector requires some common metric by which to measure the benefits, or the reduction in the burden of disease, of alternative health interventions. Early summary measures of

population health (SMPH) assessed only a single variable such as life expectancy or infant mortality. They gave information about one goal of health interventions—extending life—but no information about their other central goal—improving the quality of life of patients by treating or preventing their suffering and disability. Typical measures of health benefits that combine and assign relative value to these two kinds of health benefits include Quality Adjusted Life Years (QALYs) and Disability Adjusted Life Years (DALYs). Measures like QALYs or DALYs employ a measure of the health status of individuals and populations at different points in time, such as the Health Utilities Index (HUI) or the Quality of Well-Being Scale (QWB).

The construction of any SMPH like the HUI or the QWB requires a two step process. First a health profile must be defined describing different domains of health or function with different levels of function in each of the domains described. These domains and levels are specified in general functional terms so that they can be used across different diseases and health conditions. Second, different relative values or utilities must be assigned to these different health domains and levels so as to specify the degree to which health related quality of life has been reduced by any health condition on the profile, usually on a 0 to 1 scale, with 0 representing death and 1 representing full health. The utilities or values of different health states are typically determined by soliciting people's preferences for life with different functional limitations, and then using devices like standard gambles, time tradeoffs, or person tradeoffs in order to assign cardinal utilities to the different health states. The condition of a typical patient with any specific health problem before and after a particular health intervention can then be mapped onto the health profile of the SMPH and the relative value of that intervention in improving patients' health related quality of life can be determined. This can then be compared with the costs of the intervention to determine its relative cost effectiveness.

Objectives:

1. To explore the ethical issues that arise in the construction of CEAs for health care resource prioritization.
2. To explore the ethical issues that arise in the use of CEAs for health care resource prioritization.
3. To explore fair procedures for health care resource decision making in the light of indeterminacy and controversy about substantive principles of equitable resource prioritization.

Methodology: This work is primarily conceptual and normative, not empirical, and so the methodology reflects this fundamental difference. It involves articulating and critically evaluating normative assumptions in the construction and use of CEA and constructing ethical arguments on the issues identified. The first five of the issues enumerated below arise in the construction of CEAs and

the remainder in the use of CEAs for resource prioritization and allocation. The issues addressed in the project include:

1. Whose preferences should be used for the evaluation of health states? In particular, should the preferences of non disabled persons or the preferences of persons with the disabilities in question be used? This question is important because typical adaptations of disabled persons to their disabilities result in significantly different evaluations from the two groups, and in turn different assessments of the value of treatment, prevention, and rehabilitation.

(Publications 1, 15.)

2. Should all QALYs or DALYs count equally regardless of the age of the recipient of the health benefit? The World Health Organization in its burden of disease studies employs DALYs. The WHO assigned greater value to health gains for persons in their productive middle years than to the very young or the elderly. Is this correct, or should greater value be given to the young, or equal value to all? The broader issue here is that of age rationing and age discrimination. (Publication 8.)

3. What costs and benefits should count in CEAs of health programs? Should only direct health benefits and costs count, or also indirect non health benefits and costs? This is important because the non health benefits of many health interventions, such as the treatment of substance abuse, can be so great as to swamp the health benefits. If they are given weight in prioritization substantially different rankings of different health programs will result. Is it unfair to take account of these indirect, non health benefits and costs? (Publication 17.)

4. Should discount rates be applied to health benefits? It is widely agreed that discount rates should be applied to economic costs and benefits, but should they be applied to health benefits as well? Is a health benefit of a given size of less social value merely because it occurs in the future? The practical importance of this issue is that discounting health benefits leads to the devaluing of health programs whose benefits occur in the future, such as many public health and prevention programs.

5. What life expectancies should be used for calculating the benefits of life-saving interventions? Life expectancies differ substantially between different groups within the United States and even more between different countries. These differences are often the result of unjust social and economic conditions. If actual life expectancies are used in estimating the number of life years saved from life saving interventions, then life saving for disadvantaged persons will tend to be undervalued.

6. What priority should be given to the sickest or worse off? It is widely agreed that justice requires some special concern for the worse off. Should this apply in health resource prioritization as well? If so who are the worse off? Are they the sickest or those worst off in some global sense? How much priority should they receive? How much aggregate health benefits should be forgone in order to ensure that the worse off are treated? (Publications 10 and 11.)

7. When should small benefits to a large number of persons receive priority over large benefits to a small number of persons? Because of very large differences in the costs of different treatment interventions, it is sometimes possible to treat a

large number of persons with a relatively minor health need for the costs of treating only a few with a major health need. If the minor benefits in the aggregate are greater than the major benefits that only a few receive, should they take priority? This issue concerns the relevance of costs in prioritization and has been called the aggregation problem. (Publication 4.)

8. The conflict between fair chances and best outcomes. If we always prefer the most cost effective intervention, then persons or health needs whose treatment will produce slightly less benefit than others at the same cost will always have lower priority. Should they instead have a fair chance to get the treatment they need? If so, what does a fair chance require?

9. Does the use of CEA to set health care priorities unjustly discriminate against the disabled, even if the preference of disabled persons are used to value health states? The treatment of disabled persons will often produce fewer QALYs than the treatment of non disabled persons even when they have equal health needs and the treatments are equally effective. In the case of life saving interventions, this occurs when persons' disabilities result in their having lower life expectancies and/or quality of life. In the case of quality of life enhancing interventions, this occurs when persons' disabilities reduce the effectiveness and/or increase the cost of health interventions for them. How can the differential benefits of health interventions be taken account of in prioritization without unjustly disadvantaging persons with disabilities? (Publications 1, 6, and 9.)

10. Can or should SMPHs and CEAs be modified to incorporate concerns for equity or justice in addition to the concerns for efficiency and benefit maximization? Will doing so unduly distort measures of health? Or should attention to considerations of equity be kept separate to be dealt with by policymakers and health administrators? If so, what constitute fair procedures for resolving controversial issues about equity in health resource prioritization? (Publications 12, 15, and 16.)

Results: Publications 2, 3, 5, and 13 below address most or all of the issues enumerated above in the objectives section. A number of papers have been written treating in more detail most of the issues enumerated in the objectives section above, and the specific publications that address each issue are indicated there. The work already published makes clear that our conception of equity in health and health care contexts is complex, drawing on a number of distinct moral concerns that cannot be reduced to any simple formula or principle.

Future Directions: Additional papers will be written taking up some of the above issues not yet addressed in any detail, such as the issues of age weighting, discounting health benefits, and the conflict between fair chances and best outcomes. Some issues already addressed in completed work will be pursued further in future work. For example the paper noted below on priority to the worse

off laid out an agenda of issues or problems, but substantially more work is needed to adequately address them all. While the aggregation problem is treated briefly in publication 4 below, it can take many forms which need to be distinguished and addressed in detail. There are also additional issues not on the list of 10 above that will be pursued such as the relation of health to overall well-being. Together, this work is designed to address a broad range of equity concerns in health resource prioritization. There are tentative plans to attempt to develop these distinct concerns into an integrated view of equity in health and health care and to publish the results in book form.

The above work is largely addressed to scholarly audiences. Brock is also one of the lead writers (together with Wikler) of a WHO manual aimed at policy makers, for example in health ministries, that will address how they can take account of these considerations of equity in the resource prioritization and allocation decisions which they face.

Publications:

1. "Justice and the ADA: Does Prioritizing and Rationing Health Care Discriminate Against the Disabled?" Social Philosophy and Policy, 12 (1995) 159-184.
2. Dan W. Brock, "Considerations of Equity in Relation to Prioritization and Allocation of Health Care Resources," in Ethics, Equity and Health for All, eds. Z. Bankowski, JH. Bryant and J. Gallagher (Geneva: WHO and CIOMS, 1997).
3. Dan W. Brock, "Ethical Issues in the Development of Summary Measures of Health Status," in Summarizing Population Health: Directions for the Development and Application of Population Metrics (National Academy Press; Washington DC, 1998).
4. Dan W. Brock, "Aggregating Costs and Benefits," Philosophy and Phenomenological Research, 51 (1998) 963-67.
5. Dan W. Brock, "Ethical Issues in the Construction of Population Health Measures for the Prioritization and Rationing of Health Care," in Proceedings of the 20th World Congress of Philosophy, Vol.I, 1999.
6. Dan W. Brock, "Health Care Resource Prioritization and Discrimination Against Persons with Disabilities", in Americans With Disabilities: Implications for Individuals and Institutions. Eds. Leslie Francis and Anita Silvers. New York: Routledge, 2000.
7. Dan W. Brock, "Broadening the Bioethics Agenda", Kennedy Institute of Ethics Journal, 10 (2000) 21-38.
8. Dan W. Brock, "Discrimination Against the Elderly Within a Consequentialist Approach to Health Care Resource Allocation," in Aging: Culture, Health, and Social Change, eds.

D.N. Weisstub, D.C. Thomasma, S. Gauthier, and G.F. Tomossy. Dordrecht: Kluwer Publishers, 2001.

9. Dan W. Brock, "Two Moral Issues About Disability," American Journal of Bioethics 1,3 (2001) 1-2.

10. Dan W. Brock, "Health Resource Allocation for Vulnerable Populations" in Ethical Dimensions of Health Policy, eds. M. Danis, C. Clancy and L. Churchill. New York: Oxford University Press, 2002.

11. Dan W. Brock, "Priority to the Worst Off in Health Care Resource Prioritization," in Medicine and Social Justice, eds. M. Battin, R. Rhodes and A. Silvers. New York: Oxford University Press, 2002.

12. Dan W. Brock, "The Trade-off Between Equity and Choice: Ensuring Fair Procedures," in Hidden Assets: Values and Decision Making in the NHS, eds. Julia Neuberger and Bill New. London UK, The Kings Fund, 2002.

13. Dan W. Brock, "Ethical Issues in the Use of Cost Effectiveness Analysis for the Prioritization of Health Care Resources," in Bioethics: A Philosophical Overview, eds. George Khushf and H. Tristram Englehardt, Jr. (Dordrecht: Kluwer Publishers, forthcoming 2002).

Also in Ethical Foundations of Health Equity, eds. Sudhir Anand and Amartya Sen (Oxford: Oxford University Press, forthcoming 2002).

14. Dan W. Brock, "Ethics and Age-Dependent Rationing in Medicine: A Consequentialist View," in German translation in Ethics and Age Dependent Rationing in Medicine, ed. Karl Lauterbach. Cologne, Germany, forthcoming 2002.

15. Dan W. Brock, "Fairness and Health," "Separability of Health and Well-Being," and "Empirical Ethics, Moral Philosophy, and the Democracy Problem," in Summary Measures of Population Health, eds. C. Murray, J. Salomon, C. Mathers, A. Lopez and J. Lozano. Geneva: World Health Organization, forthcoming 2002.

16. Dan W. Brock, "The Democracy Problem in Mental Health Care Priority Setting," in Managed Care in Mental Health, ed. J. Nelson. Washington DC: Georgetown University Press, forthcoming 2003.

17. Dan W. Brock, "Separate Spheres and Indirect Benefits," in Health Equity: Fairness and Goodness, ed. D. Wikler and C.J.L Murray, Geneva Switzerland: World Health Organization, forthcoming 2003.

